

**Abstract**

A diagnostics system comprising a topological map of a target system that has nodes (38, 40, 42, 44, 46, 48) that correspond to components (29, 30, 32, 34, 36) of the target system  
5 and links that correspond to connections between the components. Associated with the topological map is a knowledge store (50) that has a structure that reflects or corresponds to that of the topological map. Included in this store (50) is a plurality of sections or libraries each of which is provided for storing design specific data associated with one of the nodes (38, 40, 42, 44, 46, 48) of the topological map. Data received from one or  
10 more sensors on the target system is included in the topological map, and used together with the design specific information in the knowledge store to diagnose faults.

**Figure 8**